**ABSTRACT**

A micro-optic polarization beam multiplexing system has collimating means for introducing a first pair of polarization-perpendicular input beams, collimating means for introducing a second pair of polarization-perpendicular input beams, a polarization beam combiner for combining the first pair and the second pair of input beams into a first combined light beam with wavelength $\lambda_1$ and a second combined light beam with wavelength $\lambda_2$, and a filter for multiplexing the first combined light beam and the second combined light beam into an output beam with wavelengths $\lambda_1$ and $\lambda_2$. The micro-optic system can also be used inversely for de-multiplexing an input beam with wavelength $\lambda_1$ and wavelength $\lambda_2$ into a first de-multiplexed light beam with wavelength $\lambda_1$ and a de-multiplexed light beam with wavelength $\lambda_2$, and then splitting them into two pairs of polarization-perpendicular beams.